



WEDNESDAY, MARCH 13, 1918

War Has Always Spurred Genius of U. S. Inventors To Produce New Weapons

Torpedo, Submarine, Mine, Ironclad, Breech-Loading Gun, Revolver, Submarine Killer and Non-Sinkable Ship Among Examples of Yankee Genius "Making Good" Under Stress of War Needs.

By Albert Payson Terhune.

WHENEVER a war starts in the very first thing some American inventor does is to devise a brand new instrument of warfare; something never thought of by any one else; something destined to help revolutionize the whole science of arms. It happens every time.

If it were not for these war-inspired Yankee inventions, the boys at the front might now be fighting with flintlocks, and relying on cavalry scouts to do the work accomplished by airship and telephone and motor car.

Name almost any war you choose and you will find it has led some American to produce a new and terrific invention. For example: In the early days of the Revolution, in 1775, a Connecticut patriot named David Bushnell hit on a plan to clear our harbors of the British warships with which our puny newborn navy could not cope. So he invented the torpedo. His idea was to fasten a small powder magazine to the bottom of an anchored ship, and to explode it by means of a clockwork apparatus. He worked out a model which was to be loaded with 100 pounds of gunpowder, and he perfected the clockwork attachment.

Then came the sticking point. How was he to get far enough under water, unobserved, to fasten the thing to the bottom of a deep-draught warship? This puzzle led him to another and far more murderous invention—the submarine. There had been crude experiments in building submersible ships from time to time for many years. But they had accomplished nothing of note. Bushnell now set out to devise a submarine that would carry his torpedo under water to the ship he wanted to sink. He made what was called "a tortoise-shaped diving boat of boiler iron, which was driven by a sort of propeller and which would contain enough air to support a man for half an hour." He named it "The American Turtle."

Attaching his torpedo to the bow of this, he approached the British warship Eagle, in New York Harbor, one night in 1776. There was a screw for fastening the torpedo to the Eagle's bottom. The casting off of a line was to start the clockwork. But the Eagle's metal sheathing was too tough for the screw to penetrate. And the first submarine attack was a failure. The next year, off New London, Bushnell crept under the water in his "Turtle" to a British war schooner alongside the frigate Cerberus, attached his torpedo and blew her up. This schooner was the first vessel to be sunk by a torpedo or by a submarine.

Robert Fulton, another American, seized on the idea of Bushnell's twin inventions. When France was at the height of the Napoleonic wars, he perfected a submarine in which he once stayed under water for five hours. It was known as "A Submarine Torpedo Boat, for Use in Naval War." His torpedo attachment was an improvement on Bushnell's. The French Government rejected it as being too deadly for both the attacked and the attacker. Napoleon also rejected Fulton's steamboat invention (offered him for war use) as "impracticable."

In the Civil War the Confederates improved still further on Fulton and Bushnell by inventing and using a little fleet of submarines known as "Davids," which did considerable minor damage to Yankee warships. These "Davids" were 35 feet long and made of boiler iron. Their torpedoes were primitive but powerful.

The first really successful torpedo (the "Spar"), by the way, came into use during the Civil War. It was used not only by submarines but by regular warships. It was a metal cylinder full of powder and stuck on the end of a long pole. Its point was then submerged, in close quarters fighting, and rammed against the enemy's hull below the water line, exploding by contact or by lanyard trigger.

The submarine mine too is a Yankee invention, bred of war. In one shape or another, the idea of the underwater mine dates back for hundreds of years. But in its first useful form it was invented and employed by America in 1777, the third year of the Revolution. The first "electrically fired" mines were invented and used during our Civil War. Twenty-eight ships were sunk or damaged by them in the course of that conflict.

As every one knows, America revolutionized all naval warfare during the Civil War by Ericsson's invention of the armor-clad fighting ship. His Monitor and the Confederate Merrimack ended forever the era of wooden craft and made possible the present day superdreadnought—just as war-driven Yankee ingenuity devised the submarine and the torpedo which could in future years sink the ironclad.

The breech-loading gun was a freak—and an almost useless and non-dependable freak, at that—until the Civil War's need for slaughter proved how awkward and slow was the muzzle-loader. American inventors set their brains to the task of perfecting a breech-loading army gun. And long before the war's end they had succeeded. Up to that time two shots a minute was the best the average infantryman could fire.

The Black Hawk War ravaged the West. In that type of border warfare the pistol was all needful. And the pistol was almost as awkward to load as was the old-fashioned rifle. So, another Yankee inventor—Samuel Colt—turned to the problem of a rapid-fire pistol. In 1830 he produced a weapon described as "a pistol with a revolving cylinder." This pistol was almost as awkward as had been the muzzle-loading and single-shooter. So it was cut down to "revolver."

The early Indian war led American settlers to study out a way whereby the cumbersome muskets of their time could be made more accurate and deadly. So they hit on a plan for breeching bullets and lengthening the gun barrels. Thus a clumsy and short-ranged and uncertain weapon soon became three as effective as heretofore—as the British were to learn at Lexington and at Bunker Hill.

The airplane—still another Yankee product—has revolutionized land warfare in Europe today as much as ever the Yankee ironclad changed sea fighting. Two of the best guns used at the front now—the Lewis and the Browning—are of American invention. The "submarine killer" and the "non-sinkable ship" are among our very latest devices for bringing war up to date.

The Allies have looked to Uncle Sam for aid, and they have not looked in vain. But perhaps the method by which he may lead them most quickly to the inevitable hour of Victory will not be merely by means of men and food and munitions. Perhaps it may be by some new American war engine which shall be as effective against the enemy as a ten-inch shell against an 1855 wooden frigate.

The idea is not at all out of the bounds of probability. The Nation which invented the torpedo and the submarine and the airship is not yet barren of inventive genius. Other wars have fanned this genius into a destructive flame. The present war will be no exception.



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The Evening World Daily Magazine

How Would You Like to Be a Japanese Dancer?

SEE ALL THE CLOTHES YOU'D HAVE TO WEAR AND THINK OF ALL THE TRUNKS YOU'D HAVE TO PACK—WHICH MME. KIMURA DOESN'T SEEM TO MIND AT ALL!



The Spread of the Deadly Prune

It Is Everywhere and in Everything; on the Interborough the Prune Is the Express That Beats the Local in Everything Except Travelling; in the Theatrical World It Is the Pair of Orchestra Seats for Grant's Tomb You Bought From a Speculator—But in Albany the Plum That Has Gone Republican Flourishes Best, for There, in the Prune Season, They Make the Laws That the Rest of Us Break.

By ARTHUR ("BUGS") BAER.

YOUTH will be served. You said it. But what's the use of being served when they're serving nothing but prunes? The prune is a staple of the fruit family and is a plum that has gone Republican. The prune is an all-year-round epidemic and is one thing that can't be thwarted by vaccination, as no horn-rimmed scientist has yet succeeded in publishing an anti-prune serum. Prunes used to lurk exclusively in boarding houses, but now we are liable to get attacked by 'em anywhere.

The Interborough slips us transportation prunes in its daily speed menu. The Interborough prunes are camouflaged as express. An express is called an express because it does things faster than a local. Which is correct. An Interborough express stops much faster than a local. The express doors slam on your fingers faster than the local doors. Express seats disappear swifter than local seats. Express passengers tread on your bunions much faster and oftener. The air gets poisoned more quickly than local air. In fact, an express does everything swifter than a local except travel.

We get theatrical prunes when we get harpooned by ticket speculators and discover that we have inherited a pair of orchestra seats in Grant's Tomb. The weather man donated prunes to us, the food purveyor wash high-cost prunes on us, and it looks as if we will have to enlarge our prune transportation facilities in order to relieve the traffic tangle.

It's even pruning season up in Albany. Albany is the place where they make laws for the rest of us to break. Albany is a political sanitarium and is a wonderful rest cure for a politician who thinks he is a statesman. After an interment at Albany a politician figures that Rip Van Winkle had insomnia. A guy has a chance to get some time off for good behavior at Auburn or Ossining, but they have to serve their sentences out in Albany.

But in order to help 'em whittle away the time, the inmates of the political detention camp at Albany are allowed to make bills. And after there is a fine crop of bills the Chief Pruner starts in to prune the crop. And he certainly gets a few bushels of prunes.

One bill passed by a city politician forbids farmers from keeping

fish and ducks in damp, unhealthy places. Another bill introduced by a rural statesman prohibits all cats to wear bells around their necks during the duration of the war. Another bill pruned from the junk heap also prohibits sportsmen from shooting snails without giving 'em a two minutes' start and a chance to consult a reliable lawyer. That's a foolish bill, as lawyers aren't reliable.

There is a bill prohibiting night schools to be open in the daytime. There's another bill compelling all cats to wear bells around their necks at night, but the legislator forgets to mention whether you get a cigar for ringing the bell with an old shoe. There are prune bills limiting the wheelbase of knitting bags. Bills for prohibiting pedestrians from stepping on fillyers. Bills limiting four-inch crullers to four-inch holes. Bills compelling owners of goldfish to keep the nuffer on their aquariums within the city limits. Bills remunerating servants for colds in ears contracted while listening through draughty keyholes. Bills preventing engineers on stationary engines from jaywalking when the boss isn't looking. Bills fining haberdashers for not having safety valves on their dollar watches.

The Albany birds pass one bill a minute and one in between. There is a bill compelling restaurant owners to measure spaghetti meals by the foot instead of by the calory. Before one bill was passed it tasted a fine and important on any citizen who put his hat on backward while opening oysters in a telephone booth for the purpose of dodging the Immigration Law, which distinctly forbids the drinking of Hudson River water in habit-forming quantities.

One bill prohibits second-hand dealers from renting broken arches and dependents to draft dodgers. Another law sneers a 50 per cent. tax on anybody who kills a moth out of season, besides confiscating three-thirds of the profits and compelling the offender to wear a brown derby while bathing at Newport. There is a bill fining any young Democrat who lends his toothpick to a stranger in the Automat, and there is a bill prohibiting city slickers from painting their thumbs blue and causing nearsighted subway ticket choppers to imagine that the blue thumb is a subway ticket.

They make bills for everything up there, but mostly for nothing.



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American Soldier "Eagle"; British Tommy "Bulldog"— Same War Spirit in Both

Miss Burleigh, After Visits to American Army Camps, Compares Our Fighting Men With England's—Yankees, Built for Speed, Have Same Spirit of Holding On That Marks British.

By Bertha Bennet Burleigh

ONE of the most interesting trips I have made here in America has been to the American soldiers in the various camps in Virginia and about New York. Not only was it interesting from the personal point of view—that is to say, to see the men and contrast their ways to ours—but also from the way of scenery, and to see how the camps—or cantonments, as they are called—are laid out.

In England, and for that matter, out in France, the huts are only one story high, a contrast to the Americans with their two tiers. And then the temperature in our huts is practically the same as outside, while here they are heated and made so warm that when you go out the cold seems to strike colder than ever. While another point of difference is in the color. Here the natural color of the wood prevails; in England, &c., they are painted to fit in with the local surroundings, the color chosen usually being green.

The planning out of the camps and the arrangement of the huts are very similar, and there, I think, the likeness ends. Nearly all our huts have gardens round them, and one of the first things our Tommies do when they get into a new camp is to set to work and decorate and give it a distinctive air, either with his regimental coat of arms, or formal ornaments are used, such as whitewashed stones or flower borders. I think the most striking characteristic of our British Tommy is his love of making the place he is staying in as much like home as possible, no matter where he is.

In the British camps not a single plot of ground is wasted and the soil between the huts is laid out and planted with vegetables of various kinds, which ultimately form an attractive addition to their menu. It helps to give the men a variety in their diet and an interest in their canteen arrangements, while gardening is an excellent change from the everyday drill and discipline.

On the whole, the average American is slight and more of the larch build than our stocky Britisher. The English build on the whole is heavier and gives one the idea of solidity. On the other hand, the American slimmness gives one the impression of speed. It is just the contrast between the American eagle and the British bulldog. But the same spirit of "holding on" animates them both. There is the same joy of living, and to see them swarming out of their huts into those of the Y. M. C. A.—well, honestly, I found no difference between them and our men. I seemed to be way in France and England with the troops, so to speak—in one of our own camps.

Everywhere I came across the same feeling of seeing this war through. Only yesterday I received a letter saying: "Tell the Americans that their boys and ours are not fed up. The end is not in sight, but all will see it through if it lasts till the last man on this side of the smash goes."

I think the slouch or campaign hat of the American soldiers is very, very attractive and distinctly American as contrasted to the leather peaked cap that they wear. In the early part of the war we had a hat like this cap, but it was found necessary when these men went to France to dispense with the stiffening, as it acted somewhat in the way of a heliograph and from aeroplanes could be easily seen as it caught the sunlight. It is fascinating to watch the angles at which they place them on their heads and to see how they harmonize with the various torsorial effects. Here the men I see are clean-shaven, whereas so many of our men had what is termed the "Charlie Chaplin" till an order had to be put out controlling artistic effects.

The thing I like least are the canvas leggings. Our puttees have the advantage of looking neater as well as acting as a support to the muscles of the leg on long route marches, but here opinions may differ as to their value. The idea of the puttee originated from the Indian troops and are no doubt better in the hot, dusty climates than in the water-logged trenches in France. It is heartening to see the progress and the rapidity with which these men get into shape and to see the intelligence that they put into their work. There is no lagging by the wayside, they put their heart and soul into it. In fact, it is astounding to see the change in one short month—the raw recruit to the soldier in uniform.

The happiest nights I have spent was watching them at their games, at their "stunts" and their amusements. They live care free, laughing and joking—a contrast, not much, to the American soldier I saw in England. There the men were serious, their bearing dignified and a credit to the American Nation; conscious of the prominent part they had to play; conscious that the job that they had come over to tackle was no light one; conscious that the Germans must be beaten on the field if the world was to have any peace for future generations.

Above all, there is that fine spirit of adventure—that of the pioneer—which has done so much to make the American what he is.

Swift a Faithless Lover

ETHEER JOHNSON, the "Stella" rick's Cathedral in Dublin he was immortalized by Dean Swift, trifling with the affections of hot young women.

At length, in 1716, he consented with the great satirist has been the subject of so many conjectures, was born in Surrey 237 years ago. While leading his "Stella" to believe that he wrote his best verses, in the guise of a faithful lover, to Miss Vanhor (in 1722 "Vanessa" learned "Vanessa," a Miss Waring, and perished his "Vanessa," who was a lover's duplicity and when Sw-ether Vanhomrigh, to become vio-ly entangled with him. When he accepted the deanery of St. Pat- followed "Vanessa" to the s-

Governors Elected by Lottery

THE tiny republic of San Marino is governed by two Captains Regent, who are chosen by a lottery and are subject to a fine of \$100 and banishment if they refuse the office. The names of twelve of the sixty members of the Grand Council are drawn and each of these nominate a candidate. The dozen men so nominated are submitted to a vote of the Council, and the six having the highest votes are included in the ancient lottery of the ingresso. Having reduced the field method of election of the errors is simple. This paper, each bearing the candidates, are placed in a box with great p-money to the cathedra Mass is celebrated, at draws from the urn of paper and the two on it are those of the Regent.